

WHAT IS CLAIMED IS:

1. A center server for collecting an image in response to a print order, comprising:
 - 5 managing means for managing position information indicating a keeping location of image data;
 - image collecting means for collecting image data designated by the print order in accordance with the print order and the position information managed by said managing means, when the print order is received from an external apparatus; and
 - 10 print instructing means for transmitting the image data collected by said image collecting means and a print request basing upon the print order to a print controller.
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2. A center server according to claim 1, further comprising image position determining means for determining the keeping location where the image data for the print order received from the external apparatus is stored, in accordance with the position information managed by said managing means, wherein said image collecting means collects the image data from the keeping location determined by said image position determining means.
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3. A center server according to claim 2, wherein said image position determining means selects the

keeping location with a smallest transmission cost, if there are a plurality of keeping locations storing a same image.

5 4. A center server according to claim 2, wherein if the keeping location of the image data determined by said image position determining means is an external image storage, said image collecting means transmits an image request for the image data to the external image 10 storage and collects an image by receiving the image data from the image storage in response to the image request.

15 5. A center server according to claim 1, wherein said managing means manages a plurality of position information per one set of the image data.

20 6. A center server according to claim 1, wherein the position information managed by said managing means is position information of an apparatus which stores the image data.

7. A center server according to claim 1, further comprising:

25 receiving means for receiving the print order from the external apparatus; and
analyzing means for analyzing the print order

received by said receiving means,

wherein said image collecting means collects the image data in accordance with an analysis result by said analyzing means.

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8. A center server according to claim 1, further comprising image registering means for registering the image data received from the external apparatus in image storing means, wherein said managing means 10 manages new position information of the image data registered by said image registering means.

9. A center server according to claim 1, wherein said managing means updates the position information 15 when the image data is moved.

10. A center server according to claim 1, further comprising print progress managing means for managing progress status of the print order received from the 20 external apparatus, wherein said print instructing means transmits the print request to the print controller in response to the print order managed by said print progress managing means, if all sets of the image data designated by the print order are collected 25 by said image collecting means.

11. A center server according to claim 10,

wherein said print progress managing means updates the progress state of the print order for which the print request was transmitted by said print instructing means.

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12. A center server according to claim 10,
wherein said print progress managing means updates the
progress status of the print order for which printing
was completed, upon reception of a print completion
10 notice from the print controller.

13. A center server according to claim 10,
further comprising correcting means for
changing/deleting the progress status of the print
15 order managed by said print progress managing means in
response to a request from the external apparatus.

14. A center server according to claim 10,
further comprising correcting means for changing the
20 progress status of the print order managed by said
print progress managing means to "print controller
unreceived" in response to a request from the print
controller.

25 15. A center server according to claim 1, wherein
said print instructing means and said print controller
are connected asynchronously, and said print

instructing means transmits the print request to the print controller when said print instructing means is connected to the print controller.

5 16. A center server according to claim 15, wherein the print controller corresponds to a print shop having an image editing apparatus and an image printing apparatus and connected to the Internet.

10 17. A center server according to claim 1, wherein the print request includes at least identification information for identifying the image data and edit information for editing the image data.

15 18. A center server according to claim 17, wherein the print request is written in an XML format.

19. A print controller comprising:
image managing means for managing position
20 information indicating a keeping location of image
data;
editing means for acquiring image data designated
by the print order from the keeping location in
accordance with the print order and the position
information managed by said managing means, and editing
the acquired image data to generate print data in
accordance with the print order, when the print order

is received from an external apparatus; and
output means for outputting the print data edited
and generated by said editing means.

5 20. A print controller according to claim 19,
wherein said editing means edits and generates the
print data in accordance with image data received
together with the print order from the external
apparatus and the acquired image data.

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21. A print controller according to claim 19,
wherein the position information managed by said image
managing means is a path of a storage in the print
controller.

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22. A print controller according to claim 19,
further comprising print order managing means for
managing progress status of the print order received
from the external apparatus.

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23. A print controller according to claim 22,
wherein the progress status of the print order managed
by said print order managing means includes at least
print standby status or print completion status.

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24. A print controller according to claim 20,
further comprising order returning means for changing

the progress status of the print standby state or the print completion status to an unreceived status by notifying an image collector in response to an instruction from the external apparatus.

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25. A print controller according to claim 19, further comprising transmission/reception means for transmitting/receiving data to/from the external apparatus, wherein said transmission/reception apparatus and the external apparatus are connected 10 asynchronously.

26. A print controller according to claim 25, wherein said transmission/reception apparatus and the 15 external apparatus are connected through dial-up.

27. A print controller according to claim 25, wherein said transmission/reception means receives the print order from the external apparatus and transmits 20 identification information for identifying the print order for which printing was completed, to the external apparatus, when said transmission/reception means is connected to the external apparatus.

25 28. A print controller according to claim 25, wherein when the image data is requested from the external apparatus to said transmission/reception

means, the requested image data is acquired in accordance with the position information managed by said image managing means, and said transmission/reception means transmits the acquired 5 image data to the external apparatus.

29. A print controller according to claim 25, further comprising register means for registering the image data in a storage of the print controller, 10 wherein when the image data is registered by said register means, said image managing means stores and manages the position information of the keeping location of the image data and image identification information of the image data, and said 15 transmission/reception means transmits the newly registered position information and the image identification information to the external apparatus.

30. A print controller according to claim 29, 20 further comprising image generating means for generating second image data from first image data registered in the storage, the second image data having a lower resolution than the first image data, wherein said transmission/reception means transmits the second 25 image data generated by said image generating means, the position information of the first image data, and the image identification information indicating a

correspondence between the first and second image data, to the external apparatus.

31. A print controller according to claim 20,
5 wherein said image managing means updates the position information when the keeping position of the managed image data is changed.

32. A print controller according to claim 24,
10 wherein said image managing means deletes the position information when the managed image data is deleted, and said transmission/reception means transmits a notice that the image data was deleted to the external apparatus.

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33. A method of collecting an image in response to a print order, comprising:

a managing step of managing position information indicating a keeping location of image data;

20 an image collecting step of collecting image data designated by the print order in accordance with the print order and the managed position information managed, when the print order is received from an external apparatus; and

25 a print instructing step of transmitting the image data collected at said image collecting step and a print request basing upon the print order to a print

controller.

34. A method according to claim 33, further comprising an image position determining step of
5 determining the keeping location where the image data for the print order received from the external apparatus is stored, in accordance with the managed position information, wherein said image collecting step collects the image data from the keeping location 10 determined at said image position determining step.

35. A method according to claim 34, wherein said image position determining step selects the keeping location with a smallest transmission cost, if there 15 are a plurality of keeping locations storing a same image.

36. A method according to claim 34, wherein if the keeping location of the image data determined at 20 said image position determining step is an external image storage, said image collecting step transmits an image request for the image data to the external image storage and collects an image by receiving the image data from the image storage in response to the image 25 request.

37. A method according to claim 33, wherein said

managing step manages a plurality of position information per one set of the image data.

38. A method according to claim 33, wherein the
5 managed position information is position information of an apparatus which stores the image data.

39. A method according to claim 33, further comprising:

10 a receiving step of receiving the print order from the external apparatus; and
an analyzing step of analyzing the print order received at said receiving step,
wherein said image collecting step collects the
15 image data in accordance with an analysis result.

40. A method according to claim 33, further comprising an image registering step of registering the image data received from the external apparatus in image storing means, wherein said managing step manages new position information of the image data registered at said image registering step.

41. A method according to claim 33, wherein said
25 managing step updates the position information when the image data is moved.

42. A method according to claim 33, further comprising a print progress managing step of managing progress status of the print order received from the external apparatus, wherein said print instructing step 5 transmits the print request to the print controller, if all sets of the image data designated by the print order are collected at said image collecting step.

43. A method according to claim 42, wherein said 10 print progress managing step updates the progress state of the print order for which the print request was transmitted at said print instructing step.

44. A method according to claim 42, wherein said 15 print progress managing step updates the progress status of the print order for which printing was completed, upon reception of a print completion notice from the print controller.

20 45. A method according to claim 42, further comprising a correcting step of changing/deleting the progress status of the print order managed at said print progress managing step in response to a request from the external apparatus.

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46. A method according to claim 42, further comprising a correcting step of changing the progress

status of the print order managed at said print progress managing step to "print controller unreceived" in response to a request from the print controller.

5 47. A method according to claim 33, wherein said print instructing step asynchronously connects an image collector controlled by the method and the print controller, and said print instructing step transmits the print request to the print controller when the
10 image collector is connected to the print controller.

15 48. A method according to claim 47, wherein the print controller corresponds to a print shop having an image editing apparatus and an image printing apparatus and connected to the Internet.

20 49. A method according to claim 33, wherein the print request includes at least identification information for identifying the image data and edit information for editing the image data.

50. A method according to claim 49, wherein the print request is written in an XML format.

25 51. A print controlling method comprising:
 an image managing step of managing position information indicating a keeping location of image

data;

an editing step of acquiring image data designated by the print order from the keeping location in accordance with the print order and the position information managed at said managing step, and editing the acquired image data to generate print data in accordance with the print order, when the print order is received from an external apparatus; and
an output step of outputting the print data edited and generated at said editing means.

52. A print controlling method according to claim 51, wherein said editing step edits and generates the print data in accordance with image data received together with the print order from the external apparatus and the acquired image data.

53. A print controlling method according to claim 51, wherein the position information managed at said image managing step is a path of a storage in the print controller.

54. A print controlling method according to claim 51, further comprising a print order managing step of managing progress status of the print order received 25 from the external apparatus.

55. A print controlling method according to claim 54, wherein the progress status of the print order managed at said print order managing means includes at least print standby status or print completion status.

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56. A print controlling method according to claim 51, further comprising an order returning step of changing the progress status of the print standby state or the print completion status to an unreceived status 10 by notifying an image collector in response to an instruction from the external apparatus.

57. A print controlling method according to claim 51, further comprising a transmission/reception step of transmitting/receiving data to/from the external 15 apparatus, wherein a print controller controlled by the method and the external apparatus are connected asynchronously.

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58. A print controlling method according to claim 57, wherein the print controller and the external apparatus are connected through dial-up.

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59. A print controlling method according to claim 57, wherein said transmission/reception step receives the print order from the external apparatus and transmits identification information for identifying

the print order for which printing was completed, to the external apparatus, when the print controller is connected to the external apparatus.

5 60. A print controlling method according to claim 57, wherein when the image data is requested from the external apparatus, the requested image data is acquired in accordance with the position information managed at said image managing step, and said
10 transmission/reception step transmits the acquired image data to the external apparatus.

15 61. A print controlling method according to claim 57, further comprising a register step of registering the image data in a storage of the print controller, wherein when the image data is registered at said register step, said image managing step stores and manages the position information of the keeping location of the image data and image identification
20 information of the image data, and said transmission/reception step transmits the newly registered position information and the image identification information to the external apparatus.

25 62. A print controlling method according to claim 61, further comprising an image generating step of generating second image data from first image data

registered in the storage, the second image data having
a lower resolution than the first image data, wherein
said transmission/reception step transmits the second
image data generated at said image generating means,
5 the position information of the first image data, and
the image identification information indicating a
correspondence between the first and second image data,
to the external apparatus.

10 63. A print controlling method according to claim
52, wherein said image managing step updates the
position information when the keeping position of the
managed image data is changed.

15 64. A print controlling method according to claim
56, wherein said image managing step deletes the
position information when the managed image data is
deleted, and said transmission/reception step transmits
a notice that the image data was deleted to the
20 external apparatus.

65. A machine-readable storage medium storing a
print control program, the program comprising:
 a managing step of managing position information
25 indicating a keeping location of image data;
 an image collecting step of collecting image data
 designated by the print order in accordance with the

print order and the managed position information
managed, when the print order is received from an
external apparatus; and

a print instructing step of transmitting the image
5 data collected at said image collecting step and a
print request basing upon the print order to a print
controller.

66. A machine-readable storage medium storing a
10 print control program, the program comprising:

an image managing step of managing position
information indicating a keeping location of image
data;

15 an editing step of acquiring image data designated
by the print order from the keeping location in
accordance with the print order and the position
information managed at said managing step, and editing
the acquired image data to generate print data in
accordance with the print order, when the print order
20 is received from an external apparatus; and

an output step of outputting the print data edited
and generated at said editing means.

67. An information processing apparatus for data
25 transmission/reception to/from an external apparatus
via a network, comprising:

storage means for storing a transmission data file

and a data file; and

transmission/reception control means for
controlling the data transmission/reception of the data
file to/from the external apparatus in accordance with
5 the transmission data file.

68. An information processing apparatus according
to claim 67, wherein the transmission data file
includes transmission/reception identification
10 information for identifying the information processing
apparatus and the external apparatus and order
information for controlling an order at the external
apparatus.

15 69. An information processing apparatus according
to claim 68, wherein the order information includes
identification information for identifying the data
file used by the order.

20 70. An information processing apparatus according
to claim 67, further comprising generating means for
generating transmission/reception control information
for controlling the data transmission/reception of the
data file in accordance with the transmission data
25 file, wherein said transmission/reception control means
controls the data transmission/reception in accordance
with the generated transmission/reception control

information.

71. An information processing apparatus according to claim 70, wherein the transmission/reception control information includes transmission completion information representative of a transmission completion of the data file, and said transmission/reception control means controls the data transmission/reception of the data file for which the transmission completion information is still not transmitted.

72. An information processing apparatus according to claim 67, wherein the information processing apparatus is applied to a system in which the external apparatus prints the data file in accordance with a print request from a document processing apparatus.

73. An information processing apparatus according to claim 67, wherein the information processing apparatus is a center server for collecting the data file of an image and making the external apparatus print the data file in accordance with the print request, a transmission method responding to the print request from a document processing apparatus is asynchronous, and a transmission method for the external apparatus is a positive transmission path establishment and transmission made by the external

apparatus.

74. An information processing apparatus according
to claim 67, wherein the information processing
5 apparatus is a center server for collecting the data
file of an image and making the external apparatus
print the data file in accordance with the print
request, and said transmission/reception control means
controls to transmit a list of print orders to the
10 external apparatus and transmit the transmission data
file and the data file corresponding to a print order
requested from the external apparatus.

75. An information processing apparatus according
15 to claim 67, wherein the information processing
apparatus is a print server for receiving the data file
in accordance with the transmission data file supplied
from the external apparatus and generating print data
in accordance with the transmission data file and the
20 data file, and said transmission/reception control
means controls to receive a list of print orders from
the external apparatus and transmits a request for a
print order to be received, to the external apparatus.

25 76. An information processing apparatus according
to claim 75, further comprising selection means for
displaying the print order to be received on a display

means in accordance with the list of print orders and selecting the print order to be received, wherein said transmission/reception control means controls to transmit a reception request for the selected print order to the external apparatus.

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77. An information processing apparatus according to claim 76, further comprising reception schedule setting means for setting information for receiving data from the external apparatus, wherein the print order to be received when the data is received from the external apparatus is automatically selected in accordance with the information set by said reception schedule setting means.

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78. An information processing apparatus according to claim 67, wherein the transmission data file has an SGML format.

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79. An information processing apparatus according to claim 67, wherein said transmission/reception control means activates service software in accordance with contents of the received transmission data file.

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80. A data transmission method for an information processing apparatus for data transmission/reception to/from an external apparatus via a network,

comprising:

a storage step of storing a transmission data file and a data file in a storage of the information processing apparatus; and

5 a transmission/reception control step of controlling the data transmission/reception of the data file to/from the external apparatus in accordance with the transmission data file.

10 81. A data transmission method according to claim 80, wherein the transmission data file includes transmission/reception identification information for identifying the information processing apparatus and the external apparatus and order information for controlling an order at the external apparatus.

15 82. A data transmission method according to claim 81, wherein the order information includes identification information for identifying the data file used by the order.

20 83. A data transmission method according to claim 80, further comprising a generating step of generating transmission/reception control information for controlling the data transmission/reception of the data file in accordance with the transmission data file, wherein said transmission/reception control step

controls the data transmission/reception in accordance with the generated transmission/reception control information.

5 84. A data transmission method according to claim
83, wherein the transmission/reception control
information includes transmission completion
information representative of a transmission completion
of the data file, and said transmission/reception
10 control step controls the data transmission/reception
of the data file for which the transmission completion
information is still not transmitted.

15 85. A data transmission method according to claim
80, wherein the data transmission method is applied to
a system in which the external apparatus prints the
data file in accordance with a print request from a
document processing apparatus.

20 86. A data transmission method according to claim
80, wherein the data transmission method is a method of
data transfer of a center server for collecting the
data file of an image and making the external apparatus
print the data file in accordance with the print
25 request, a transmission method responding to the print
request from a document processing apparatus is
asynchronous, and a transmission method for the

external apparatus is a positive transmission path establishment and transmission made by the external apparatus.

5 87. A data transmission method according to claim 80, wherein the data transmission method is a method of controlling data transfer of a center server for collecting the data file of an image and making the external apparatus print the data file in accordance 10 with the print request, and said transmission/reception control step controls to transmit a list of print orders to the external apparatus and transmit the transmission data file and the data file corresponding to a print order requested from the external apparatus.

15 88. A data transmission method according to claim 80, wherein the data transmission method is a method of controlling data transfer of a print server for receiving the data file in accordance with the 20 transmission data file supplied from the external apparatus and generating print data in accordance with the transmission data file and the data file, and said transmission/reception control step controls to receive a list of print orders from the external apparatus and 25 transmits a request for a print order to be received, to the external apparatus.

89. A data transmission method according to claim
88, further comprising a selection step of displaying
the print order to be received on a display means in
accordance with the list of print orders and selecting
5 the print order to be received, wherein said
transmission/reception control step controls to
transmit a reception request for the selected print
order to the external apparatus.

10 90. A data transmission method according to claim
89, further comprising a reception schedule setting
step of setting information for receiving data from the
external apparatus, wherein the print order to be
received when the data is received from the external
15 apparatus is automatically selected in accordance with
the information set at said reception schedule setting
step.

91. A data transmission method according to claim
20 80, wherein the transmission data file has an SGML
format.

92. A data transmission method according to claim
80, wherein said transmission/reception control step
25 activates service software in accordance with contents
of the received transmission data file.

93. A machine-readable storage medium storing a
data transmission program for an information processing
apparatus for data transmission/reception to/from an
external apparatus via a network, the program
5 comprising:

a storage step of storing a transmission data file
and a data file in a storage of the information
processing apparatus; and

10 a transmission/reception control step of
controlling the data transmission/reception of the data
file to/from the external apparatus in accordance with
the transmission data file.

94. An information processing apparatus for
15 managing a position of an image, the apparatus being
capable of communicating with a plurality of image
storing apparatuses via a network and comprising:
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managing means for managing specific information
representative of the image storing apparatus storing
image data; and

identifying means for identifying the image
apparatus storing the image data requested by an
external apparatus in accordance with the specific
information stored in said managing means.

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95. An information processing apparatus according
to claim 94, wherein said managing means manages the

specific information by using identification information for identifying each set of image data corresponding to each of a plurality of resolutions of an image.

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96. An information processing apparatus according to claim 94, wherein said managing means manages the specific information including apparatus identification information for identifying the external image storage 10 storing apparatus storing the image data and location identification information for identifying a keeping location in the information processing apparatus.

15 97. An information processing apparatus according to claim 94, further comprising updating means for updating the specific information in accordance with position update information of the image data transmitted from the external image storage.

20 98. An information processing apparatus according to claim 97, wherein the position update information includes registration information indicating that image data is newly registered and change information indicating a change of the keeping location of already 25 stored image data.

99. An information processing apparatus according

to claim 94, further comprising transfer controlling means for controlling, when the image data is moved or copied from the external image storage apparatus to another image storage apparatus, to receive the image 5 data from the image storage apparatus at a move source or a copy source and transfer the image data to the image storage apparatus at a move target or a copy target.

10 100. An information processing apparatus according to claim 94, further comprising requesting means for transmitting a transmission request for the image data to an external apparatus, wherein if it is necessary to acquire the image data from the external 15 image storing apparatus, said requesting means transmits the transmission request to the external image storage apparatus identified by said identifying means.

20 101. An information processing apparatus according to claim 100, further comprising acquiring means for acquiring the image data from the external apparatus in response to the transmission request for the image data transmitted by said requesting means, 25 wherein said acquiring means acquires the image data whose keeping location is identified by the external apparatus by using the specific information managed by

an image storage of the external apparatus.

102. An information processing apparatus
according to claim 94, further comprising registering
5 means for receiving a print image from a client
computer and registering a print image in an image
storage, wherein said managing means manages the
specific information of the registered print image.

10 103. An information processing apparatus
according to claim 102, further comprising image
generating means for generating an edit image from the
registered print image and storing the edit image in
the image storage, wherein the generated edit image is
15 transmitted to the external apparatus issued the
transmission request for the image data.

20 104. An information processing apparatus
according to claim 94, wherein the information
processing apparatus is applied to a system in which
image data necessary a print request is acquired from a
plurality of image storing apparatuses in accordance
with the print request transmitted from a document
processing apparatus.

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105. An image position managing method for an
information processing apparatus for managing a

position of an image, the apparatus being capable of communicating with a plurality of image storing apparatuses via a network, the method comprising:

5 a managing step of managing specific information representative of the image storing apparatus storing image data by storing the specific information in a storage; and

10 an identifying step of identifying the image apparatus storing the image data requested by an external apparatus in accordance with the specific information stored in the storage.

106. An image position managing method according to claim 105, wherein said managing step manages the specific information by using identification information for identifying each set of image data corresponding to each of a plurality of resolutions of an image.

20 107. An image position managing method according to claim 105, wherein said managing step manages the specific information including apparatus identification information for identifying the external image storage storing apparatus storing the image data and location identification information for identifying a keeping location in the information processing apparatus.

108. An image position managing method according
to claim 105, further comprising an updating step of
updating the specific information in accordance with
position update information of the image data
5 transmitted from the external image storage.

109. An image position managing method according
to claim 108, wherein the position update information
includes registration information indicating that image
10 data is newly registered and change information
indicating a change of the keeping location of already
stored image data.

110. An image position managing method according
15 to claim 105, further comprising a transfer controlling
step of controlling, when the image data is moved or
copied from the external image storage apparatus to
another image storage apparatus, to receive the image
data from the image storage apparatus at a move source
20 or a copy source and transfer the image data to the
image storage apparatus at a move target or a copy
target.

111. An image position managing method according
25 to claim 105, further comprising a requesting step of
transmitting a transmission request for the image data
to an external apparatus, wherein if it is necessary to

acquire the image data from the external image storing apparatus, said requesting step transmits the transmission request to the external image storage apparatus identified at said identifying step.

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112. An image position managing method according to claim 111, further comprising an acquiring step of acquiring the image data from the external apparatus in response to the transmission request for the image data transmitted at said requesting step, wherein said acquiring step acquires the image data whose keeping location is identified by the external apparatus by using the specific information managed by an image storage of the external apparatus.

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113. An image position managing method according to claim 105, further comprising a registering step of receiving a print image from a client computer and registering a print image in an image storage, wherein said managing step manages the specific information of the registered print image.

114. An image position managing method according to claim 113, further comprising an image generating step of generating an edit image from the registered print image and storing the edit image in the image storage, wherein the generated edit image is

transmitted to the external apparatus issued the transmission request for the image data.

115. An image position managing method according
5 to claim 105, wherein the information processing apparatus is applied to a system in which image data necessary a print request is acquired from a plurality of image storing apparatuses in accordance with the print request transmitted from a document processing
10 apparatus.

116. A machine-readable storage medium storing an image position managing program for an information processing apparatus for managing a position of an image, the apparatus being capable of communicating with a plurality of image storing apparatuses via a network, the program comprising:
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a managing step of managing specific information representative of the image storing apparatus storing
20 image data by storing the specific information in a storage; and

an identifying step of identifying the image apparatus storing the image data requested by an external apparatus in accordance with the specific
25 information stored in the storage.